

PATENT
Reply under 37 CFR 1.116
EXPEDITED PROCEDURE
Group 1731

REMARKS

Claims 1-15 are pending in this application. Claims 1-15 are rejected. Claim 1 is amended hereby.

Responsive to the rejection of claims 1, 6-12, 14 and 15 under 35 U.S.C. § 102(b) as being anticipated by, or alternatively under 35 U.S.C. § 103(a) as being obvious by U.S. Patent No. 5,223,090 (Klungness et al.), Applicant has amended claim 1 and submits that claims 1, 6-12, 14 and 15 are now in condition for allowance.

Klungness et al. '090 disclose a method for fiber loading a chemical compound where calcium oxide (lime) or calcium hydroxide is mixed with dewatered crumb pulp having the desired level of moisture (column 6, lines 8-10). Dewatered crumb pulp is utilized which contains less moisture than the free moisture level (column 6, lines 47-49). (Emphasis added). The carbon dioxide is added at a level sufficient to cause complete reaction of the chemical with the gas to form the water insoluble chemical compound (column 6, lines 38-40). In the case of paper pulp, the paper pulp can be immediately transferred to a papermaking operation where it is formed into a slurry, refined and placed onto a Fourdrinier machine or other suitable papermaking apparatus (column 6, lines 56-59). Alternatively, the paper pulp having the chemical compound loaded therein may be further dried and shipped as an item of commerce to a papermaking facility for subsequent usage (column 6, lines 60-63). Dewatered crumb pulp is utilized which contains less moisture than the free moisture level (column 6, lines 47-49). (Emphasis added).

In contrast, claim 1, as amended, recites in part: "loading the undried pulp with an additive by way of a chemical precipitation reaction . . .". (Emphasis added). Applicant submits that such an invention is neither taught, disclosed or suggested by Klungness et al. '090, or any of the other cited references, alone or in combination, and includes distinct advantages thereover.

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Klungness et al. '090 disclose a method for fiber loading a chemical compound where calcium oxide (lime) or calcium hydroxide is mixed with dewatered crumb pulp. However, Klungness et al. '090 fails to disclose or suggest loading the undried pulp with an additive by way of a chemical precipitation reaction.

The present inventive combination of the fiber pulp production with the loading process provides improved paper qualities. Since no drying occurs between the pulp production process and the loading process, more calcium hydroxide or calcium oxide can penetrate through the fiber walls, thereby allowing a greater filler content at the inner cell wall surfaces to be achieved after the precipitation process, and increasing the desired effect through loading. Compared with fiber pulp to which filler (calcium carbonate) was added in the conventional method, the consistencies, optical characteristics, the specific volume (cm³/g) and the porosity, as well as the formation of the produced paper can be increased or improved.

For all of the foregoing reasons, Applicant submits that claim 1, and claims 6-12, 14 and 15 depending therefrom, are now in condition for allowance, which is hereby respectfully requested.

Responsive to the rejection of claims 2-5 under 35 U.S.C. § 103(a) as being obvious by U.S. Patent No. 5,223,090 (Klungness et al.) in view of U.S. Patent No. 6,602,385 (Drummond) or U.S. Patent No. 6,436,238 (Pitkanen), Applicant respectfully submits that the amendment to claim 1 described above distinguishes claim 1, and any dependent claims including claims 2-5, from the cited art including Klungness et al. '090, Drummond '385 and Pitkanen '238. For all of the foregoing reasons, Applicant submits that claim 1, and claims 2-5 depending therefrom, are now in condition for allowance, which is hereby respectfully requested.

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Responsive to the rejection of claim 13 under 35 U.S.C. § 103(a) as being obvious by U.S. Patent No. 5,223,090 (Klungness et al.) in view of U.S. Patent No. 2,599,093 (Craig), Applicant respectfully submits that the amendment to claim 1 described above distinguishes claim 1, and any dependent claims including claim 13, from the cited art including Klungness et al. '090 and Craig '093. For all of the foregoing reasons, Applicant submits that claim 1, and claim 13 depending therefrom, are now in condition for allowance, which is hereby respectfully requested.

Responsive to the rejection of claims 1-3 and 6-15 under 35 U.S.C. § 103(a) as being obvious by U.S. Patent No. 2,599,093 (Craig) in view of U.S. Patent No. 5,223,090 (Klungness et al.), Applicant respectfully submits that the amendment to claim 1 described above distinguishes claim 1, and any dependent claims including claims 2, 3 and 6-15, from the cited art including Craig '093 and Klungness et al. '090. For all of the foregoing reasons, Applicant submits that claim 1, and claims 2, 3 and 6-15 depending therefrom, are now in condition for allowance, which is hereby respectfully requested.

Responsive to the rejection of claims 4 and 5 under 35 U.S.C. § 103(a) as being obvious by U.S. Patent No. 2,599,093 (Craig) in view of U.S. Patent No. 5,223,090 (Klungness et al.), and in further view of U.S. Patent No. 6,602,385 (Drummond) or U.S. Patent No. 6,436,238 (Pitkanen), Applicant respectfully submits that the amendment to claim 1 described above distinguishes claim 1, and any dependent claims including claims 4 and 5, from the cited art including Craig '093, Klungness et al. '090, Drummond '385 and Pitkanen '238. For all of the foregoing reasons, Applicant submits that claim 1, and claims 4 and 5 depending therefrom, are now in condition for allowance, which is hereby respectfully requested.

It is further submitted that the requested amendments to the claims, submitted after the Office Action designated as Final, should be entered, in that the amendment will place all

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remaining claims in condition for allowance. Further, the requested amendments to the claims simplify the issues for a potential appeal by reducing the number of claims under consideration and clarifying the claimed structure.

For the foregoing reasons, Applicant submits that no combination of the cited references teaches, discloses or suggests the subject matter of the amended claims. The pending claims are therefore in condition for allowance, and Applicant respectfully requests withdrawal of all rejections and allowance of the claims.

In the event Applicant has overlooked the need for an extension of time, an additional extension of time, payment of fee, or additional payment of fee, Applicant hereby conditionally petitions therefor and authorizes that any charges be made to Deposit Account No. 20-0095,

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Should any question concerning any of the foregoing arise, the Examiner is invited to telephone the undersigned at (260) 897-3400.

Respectfully submitted,

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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being transmitted via facsimile to the U.S. Patent and Trademark Office, on: April 15, 2005

Stephen D. Horchem, Reg. No. 53,035

Name of Registered Representative

Signature

April 15, 2005

Date

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